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ABSTRACT

This guide for aviation pilot II training begins with a course description, resource information, and a course outline. Tasks/competencies are categorized into 10 concept/duty areas: understanding aircraft staffs and procedures for safe recovery; understanding procedures for constant altitude turns; understanding procedures for traffic pattern operations; understanding how altitude and movement in flight affect the human body; understanding short and soft field operations; understanding procedures for planning a low altitude cross-country flight; understanding the factors that affect decision making in aviation; understanding accident reporting, private pilot privileges and limitations, flight operations, and use of technical publications; understanding planning and procedures for night flight; and understanding procedures for the Federal Aviation Administration's private pilot night check. Four to 11 tasks are listed for each concept/duty. A performance objective, criterion-referenced measure, and enabling objective are provided for each task/competency. At the end of each concept/duty category, resources are listed by task. (YLB)

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Aviation Pilot Training

Task Analyses
Year II

Field Review Copy

A Joint Project of
Henrico County Public Schools
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1990

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AVIATION PILOT TRAINING II

TASK ANALYSES

Prepared by

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Henrico County Public Schools

in cooperation with

Virginia Vocational Curriculum and Resource Center

1990

PREFACE

The task analyses for Aviation Pilot Training I and II and Aviation Technician I and the flight syllabus were prepared by Colonel Richard Upchurch, USMC (Retired), Aviation Programs Supervisor for Henrico County Public Schools.

The curriculum will be field tested in the aviation programs at the Highland Springs Technical Center during the 1990-91 school year.

The guides were prepared for publication by the Virginia Vocational Curriculum and Resource Center, Vocational and Community Education, Henrico County Public Schools.

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COURSE DESCRIPTION AND RESOURCE INFORMATION

Course Description: **Aviation Pilot Training II**

Aviation Pilot Training II concentrates on the ground school and flight training required for student-pilots to complete successfully the FAA flight check for a private pilot license. Ground school topics include advanced meteorology, cross-country navigation, flight manuevers, additional study of the Federal Aviation Regulations (FARs), weight and balance, flight physiology aerodynamics, and radio navigation. In addition to the ground school taught in a three-hour block at Highland Springs Technical Center, students receive approximately 40 hours of instructional flight time and an additional 40 hours of pre- and post-flight briefings. All instructional flights are conducted at a local airfield with a fixed base operator (FBO) under contract with Henrico County Public Schools.

Resources:

Texts:

Aviation Fundamentals. 2nd ed. Englewood, Colorado: Jeppesen Sanderson, Inc., 1989.

The Private Pilot Manual. 2nd ed. Englewood, Colorado: Jeppesen Sanderson, 1989.

Private Pilot Question Book. Oklahoma City, Oklahoma: FAA, United States Department of Transportation, 1988.

Audiovisuals:

Jeppesen Sanderson transparencies may be ordered from Jeppesen Sanderson, Inc., Englewood, Colorado.

Federal Aviation Administration films and videotapes may be acquired through the Virginia Department of Aviation, Virginia Aviation Museum, Richmond International Airport.

Equipment and Material:

Static aircraft: Beech "Sundowner" (nonflyable)
GAT-1 full motion light aircraft simulator
ATC 610 instrument panel simulator with engine and flight controls

COURSE DESCRIPTION AND RESOURCE INFORMATION (continued)

Equipment and Material (continued):

- EGB flight computer mockup
- CSG flight computers
- Plastic and plexiglass navigational plotters
- Sectional charts
- Enroute low altitude (FLIP) charts and approach plates
- Assorted aircraft parts, instruments, radios, and other components acquired from aircraft salvage units and Federal Surplus
- Aeronautical charts, diagrams, photographs, and other documents acquired from military and civilian aviation agencies in the Richmond area

COURSE OUTLINE

Aviation Pilot Training II

CONTENT	TASK NUMBER
I. AIRCRAFT STALLS AND RECOVERY	
A. Inadvertent stalls	1.1
B. Power-off stalls	1.2, 1.3
C. Power-on stalls	1.4, 1.5
D. Stall warning systems	1.6
II. CONSTANT ALTITUDE TURNS	
A. Procedures for turns	2.1
B. Loss of altitude	2.2
C. Unbalanced flight	2.3
D. Recovery from stall during turn	2.4
III. TRAFFIC PATTERN OPERATIONS	
A. Landing pattern	3.1
B. Downwind position	3.2
C. 180-degree position and base leg	3.3
D. Final approach	3.4
E. Touch-and-go landing	3.5
F. Closed pattern	3.6
IV. EFFECTS OF ALTITUDE AND MOVEMENT IN FLIGHT	
A. Human eye functions	4.1
B. Visual illusions	4.2
C. Aircraft position lights	4.3
D. Visual, vestibular, and kinesthetic sense	4.4
E. Spatial illusions	4.5
F. Flicker vertigo	4.6
G. Motion sickness	4.7
H. Hypoxia	4.8
I. Effects of altitude changes	4.9
J. Scuba diving	4.10
K. Alcohol, drugs, and smoking	4.11
V. SHORT AND SOFT FIELD OPERATIONS	
A. Short field takeoffs and landings	5.1, 5.2
B. Soft field takeoffs and landings	5.3, 5.4

COURSE OUTLINE (continued)

CONTENT	TASK NUMBER
VI. LOW-ALTITUDE CROSS-COUNTRY FLIGHT	
A. Four planning steps	6.1
B. Navigational log	6.2
C. Items for the weather briefer	6.3
D. VFR flight plan	6.4
E. Five items for cross-country flight	6.5
F. Cockpit arrangement and management	6.6
VII. DECISION MAKING IN AVIATION	
A. Crucial factors in making decisions	7.1
B. "DECIDE"	7.2
C. Hazardous attitudes	7.3
D. Three types of stress	7.4
E. "I'm Safe" checklist	7.5
VIII. ACCIDENT REPORTING, PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND TECHNICAL PUBLICATIONS	
A. Accident reporting	8.1
B. Pilot privileges and limitations	8.2
C. Flight operations	8.3
D. *Airman's Information Manual* (AIM)	8.4
E. FAA advisory circulars	8.5
IX. NIGHT FLIGHT	
A. Internal and external aircraft lighting	9.1
B. Lighting at municipal airports	9.2
C. Cross-country flight planning	9.3
D. Physiological effects	9.4
X. FAA PRIVATE PILOT FLIGHT CHECK	
A. General instructions	10.1
B. Included items	10.2
C. Preparation for flight check	10.3
D. Responsibilities of pilot after flight check	10.4

CONCEPT/DUTY AREAS

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY
2. UNDERSTANDING PROCEDURES FOR CONSTANT ALTITUDE TURNS
3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY
5. UNDERSTANDING SHORT AND SOFT FIELD OPERATIONS
6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT
7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION
8. UNDERSTANDING ACCIDENT REPORTING, PRIVATE PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS
9. UNDERSTANDING PLANNING AND PROCEDURES FOR NIGHT FLIGHT
10. UNDERSTANDING PROCEDURES FOR THE FAA PRIVATE PILOT'S FLIGHT CHECK

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

TASKS/COMPETENCIES

1.1 Explain how an aircraft can inadvertently enter a stall.

1.2 Explain the procedure for entering a practice power-off stall.

1.3 Explain the procedure for recovering from a practice power-off stall.

1.4 Explain the procedure for entering a practice power-on stall.

1.5 Explain the procedure for recovering from a practice power-on stall.

1.6 Explain the stall warning system in light aircraft and the appropriate action a pilot should take when it is activated.

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

1.1 Explain how an aircraft can inadvertently enter a stall.

PERFORMANCE OBJECTIVE

P1.1 Given the situation of an aircraft in power-on and power-off flight, explain with 75% accuracy how a stall can inadvertently occur in each case.

CRITERION-REFERENCED MEASURE

C1.1 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review JS video *Takeoffs and Landings.*
2. Use overhead projector to go over takeoff and landing pattern, sequence, and touchdown procedures.
3. Show JS video *Advanced Maneuvers* to introduce power-off and power-on stalls.

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

1.2 Explain the procedure for entering a practice power-off stall.

PERFORMANCE OBJECTIVE

P1.2 Given the situation of an aircraft in straight and level flight with throttle at idle, explain with 75% accuracy the procedure for entering a constant altitude power-off stall.

CRITERION-REFERENCED MEASURE

C1.2 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Demonstrate entering power-off stalls in the GAT-1 simulator.

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

1.3 Explain the procedure for recovering from a practice power-off stall.

PERFORMANCE OBJECTIVE

P1.3 Given the situation of an aircraft in straight and level flight, in a landing configuration with throttle at idle, and entering a stall, explain with 95% accuracy how to recover from the stall without losing more than 200 feet of altitude.

CRITERION-REFERENCED MEASURE

C1.3 Written or oral test, 95% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Have students practice entering and recovering from a power-off stall in the GAT-1 simulator.

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

1.4 Explain the procedure for entering a practice power-on stall.

PERFORMANCE OBJECTIVE

P1.4 Given the situation of an aircraft with takeoff power in a climb, explain with 95% accuracy how to enter a practice power-on stall.

CRITERION-REFERENCED MEASURE

C1.4 Written or oral test, 95% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Demonstrate entering a power-on stall in the GAT-1 simulator.

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

1.5 Explain the procedure for recovering from a practice power-on stall.

PERFORMANCE OBJECTIVE

P1.5 Given the situation of an aircraft with takeoff power in a climb entering a stall, explain with 95% accuracy how to recover from the stall without losing more than 200 feet of altitude.

CRITERION-REFERENCED MEASURE

C1.5 Written or oral test, 95% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Have students practice entering and recovering from a power-on stall in the GAT-1 simulator.
2. Use FAA video *Stall/Spin Classic Facts and Myths* to demonstrate the dangers in progressing from stalls to spins.

CONCEPT/DUTY AREA

1. UNDERSTANDING AIRCRAFT STALLS AND PROCEDURES FOR SAFE RECOVERY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

1.6 Explain the stall warning system in light aircraft and the appropriate action a pilot should take when it is activated.

PERFORMANCE OBJECTIVE

P1.6 Given the situation of an aircraft approaching a stall, explain with 85% accuracy how the pilot is warned of the imminent stall and the appropriate corrective action.

CRITERION-REFERENCED MEASURE

C1.6 Written or oral test, 85% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review JS video *Advanced Maneuvers* to illustrate the stall warning system and action a pilot should take when the system activtes.

RESOURCES

TASK 1.1

Equipment and Material: Overhead projector

Audiovisuals: *Advanced Maneuvers* (videotape). Jeppesen Sanderson.
Takeoffs and Landings (videotape). Jeppesen Sanderson.

TASK 1.2

Equipment and Material: GAT-1 simulator

TASK 1.3

Equipment and Material: GAT-1 simulator

TASK 1.4

Equipment and Material: GAT-1 simulator

TASK 1.5

Equipment and Material: GAT-1 simulator

Audiovisuals: *Stall/Spin Classic Facts and Myths* (videotape). FAA.

TASK 1.6

Audiovisuals: *Advanced Maneuvers* (videotape). Jeppesen Sanderson.

CONCEPT/DUTY AREA

2. UNDERSTANDING PROCEDURES FOR CONSTANT ALTITUDE TURNS

TASKS/COMPETENCIES

2.1 Explain the procedure for making level, balanced, 360 degree turns of 15, 30, 45, and 60 degrees of bank.

2.2 Explain the recovery procedure if altitude is lost during an attempted steep, level turn.

2.3 Explain how unbalanced flight can cause stall during a steep, level turn.

2.4 Explain the procedure for recovering from a stall during a steep, level turn.

CONCEPT/DUTY AREA	COURSE
2. UNDERSTANDING PROCEDURES FOR CONSTANT ALTITUDE TURNS	Aviation Pilot Training II

TASK/COMPETENCY

2.1 Explain the procedure for making level, balanced, 360 degree turns of 15, 30, 45, and 60 degrees of bank.

PERFORMANCE OBJECTIVE

P2.1 Given the example of an aircraft in level flight, explain with 75% accuracy how to enter and maintain balanced 360 degree turns of 15, 30, 45, and 60 degrees of bank.

CRITERION-REFERENCED MEASURE

C2.1 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Demonstrate steep, level turns in the GAT-1 simulator.

CONCEPT/DUTY AREA	COURSE
2. UNDERSTANDING PROCEDURES FOR CONSTANT ALTITUDE TURNS	Aviation Pilot Training II

TASK/COMPETENCY

2.2 Explain the recovery procedure if altitude is lost during an attempted steep, level turn.

PERFORMANCE OBJECTIVE

P2.2 Given the example of an aircraft in a level turn at 45 degrees angle of bank, explain with 80% accuracy the recovery procedure if the aircraft starts to lose altitude.

CRITERION-REFERENCED MEASURE

C2.2 Written or oral test, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Have students use the GAT-1 simulator to practice entering and maintaining steep, level turns.

CONCEPT/DUTY AREA

2. UNDERSTANDING PROCEDURES FOR CONSTANT ALTITUDE TURNS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

2.3 Explain how unbalanced flight can cause stall during a steep, level turn.

PERFORMANCE OBJECTIVE

P2.3 Given the situation of an aircraft in unbalanced flight while attempting a steep, level turn, explain with 75% accuracy how the combination of these conditions may cause the aircraft to stall.

CRITERION-REFERENCED MEASURE

C2.3 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review JS video *Advanced Maneuvers*, and discuss the importance of balanced flight.
2. Have students use the GAT-1 simulator to practice turns, climbs, and descents.
3. Stress the importance of balanced flight.

CONCEPT/DUTY AREA

2. UNDERSTANDING PROCEDURES FOR CONSTANT ALTITUDE TURNS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

2.4 Explain the procedure for recovering from a stall during a steep, level turn.

PERFORMANCE OBJECTIVE

P2.4 Given the situation of an aircraft in a stall while attempting a steep, level turn, explain with 85% accuracy the recovery procedure.

CRITERION-REFERENCED MEASURE

C2.4 Written or oral test, 85% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use the GAT-1 simulator to demonstrate how to recover from a steep turn stall.
2. Have students use the GAT-1 simulator to practice recovery from steep turn stalls.

RESOURCES

TASK 2.1

Equipment and Material: GAT-1 simulator

TASK 2.2

Equipment and Material: GAT-1 simulator

TASK 2.3

Equipment and Material: GAT-1 simulator

Audiovisuals: *Advanced Maneuvers* (videotape). Jeppesen Sanderson.

TASK 2.4

Equipment and Material: GAT-1 simulator

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

TASKS/COMPETENCIES

3.1 Explain the procedure for entering the landing pattern at an uncontrolled airport.

3.2 Explain the procedures for the downwind position at an uncontrolled airport.

3.3 Explain the procedures for the 180 degree position and base leg at an uncontrolled airport.

3.4 Explain the procedures for the final approach at an uncontrolled airport.

3.5 Explain the procedures for a touch-and-go landing at an uncontrolled airport.

3.6 Explain the procedures for a closed pattern at an uncontrolled airport.

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

3.1 Explain the procedure for entering the landing pattern at an uncontrolled airport.

PERFORMANCE OBJECTIVE

P3.1 Given a model aircraft and an enlarged diagram of a landing pattern at an uncontrolled airport, explain with 75% accuracy the procedures for entering the landing pattern.

CRITERION-REFERENCED MEASURE

C3.1 Demonstration, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Divide students into pairs and have them quiz each other on the procedures when approaching an uncontrolled airport for landing.
2. Have students listen to taped conversations between pilots and UNICOM as aircraft approach fields for landing.

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

3.2 Explain the procedures for the downwind position at an uncontrolled airport.

PERFORMANCE OBJECTIVE

P3.2 Given a model aircraft and an enlarged diagram of a landing pattern at an uncontrolled airport, explain with 75% accuracy the procedures when downwind in the landing pattern.

CRITERION-REFERENCED MEASURE

C3.2 Demonstration, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Divide students into pairs and have them quiz each other on procedures when downwind in the landing pattern at an uncontrolled airport.

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

3.3 Explain the procedures for the 180 degree position and base leg at an uncontrolled airport.

PERFORMANCE OBJECTIVE

P3.3 Given a model aircraft and an enlarged diagram of a landing pattern at an uncontrolled airport, explain with 75% accuracy the procedures when at the 180 degree position and on base leg.

CRITERION-REFERENCED MEASURE

C3.3 Demonstration, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Divide students into pairs and have them quiz each other on the procedures when at the 180 degree position and on base leg at an uncontrolled airport.

2. Have students listen to taped conversations between pilots and UNICOM as aircraft approach the field for landing.

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

3.4 Explain the procedures for the final approach at an uncontrolled airport.

PERFORMANCE OBJECTIVE

P3.4 Given a model aircraft and an enlarged diagram of a landing pattern at an uncontrolled airport, explain with 75% accuracy the procedures for the final approach.

CRITERION-REFERENCED MEASURE

C3.4 Demonstration, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Divide students into pairs and have them quiz each other on procedures for final approach at an uncontrolled airport.

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

3.5 Explain the procedures for a touch-and-go landing at an uncontrolled airport.

PERFORMANCE OBJECTIVE

P3.5 Given a model aircraft and an enlarged diagram of a runway at an uncontrolled airport, explain with 85% accuracy the procedures for a touch-and-go landing.

CRITERION-REFERENCED MEASURE

C3.5 Demonstration, 85% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Divide students into pairs and have them quiz each other on procedures for touch-and-go landings at an uncontrolled airport.

CONCEPT/DUTY AREA

3. UNDERSTANDING PROCEDURES FOR TRAFFIC PATTERN OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

3.6 Explain the procedures for a closed pattern at an uncontrolled airport.

PERFORMANCE OBJECTIVE

P3.6 Given a model aircraft and an enlarged diagram of the landing pattern at an uncontrolled airport, explain with 85% accuracy the procedures for a closed pattern.

CRITERION-REFERENCED MEASURE

C3.6 Demonstration, 85% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Have students use the diagram of an airfield and quiz each other on the procedures in a closed pattern.

RESOURCES

TASK 3.1

Equipment and Material: Enlarged diagram of landing pattern

Audiovisuals: Taped conversation between pilots and UNICOM

TASK 3.2

Equipment and Material: Model aircraft
Enlarged diagram of landing pattern

TASK 3.3

Equipment and Material: Model aircraft
Enlarged diagram of landing pattern

Audiovisuals: Taped conversations between pilots and UNICOM

TASK 3.4

Equipment and Material: Model aircraft
Enlarged diagram of landing pattern

TASK 3.5

Equipment and Material: Model aircraft
Enlarged diagram of landing pattern

TASK 3.6

Equipment and Material: Model aircraft
Enlarged diagram of landing pattern

CONCEPT/DUTY AREA

4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY

TASKS/COMPETENCIES

4.1 Explain how the components of the human eye function in both daylight and darkness and how an aviator can increase his night acuity.

4.2 Explain the visual illusions that can occur during flight.

4.3 Explain aircraft position lights and how they are used to avoid collisions.

4.4 Explain how visual sense, vestibular sense, and kinesthetic sense differ.

4.5 Explain the various spatial illusions that may result from spatial disorientation.

4.6 Explain flicker vertigo and its prevention.

4.7 Explain the cause, prevention, and alleviation of motion sickness.

4.8 Explain the symptoms and treatment of hypoxia.

4.9 Explain the effects of altitude changes on the sinuses, ears, teeth, and gastrointestinal tract.

4.10 Explain why scuba diving is dangerous for aviators.

4.11 Explain why alcohol, drugs, and smoking are all dangerous for aviators.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.1 Explain how the components of the human eye function in both daylight and darkness and how an aviator can increase his night visual acuity.

PERFORMANCE OBJECTIVE

P4.1 Given a diagram of the human eye, explain with 75% accuracy how the components function in both daylight and darkness and how an aviator can increase his night visual acuity.

CRITERION-REFERENCED MEASURE

C4.1 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use FAA film *Dusk to Dawn* to introduce the eye and night flight.
2. Use the VAA video *The Eagle-Eyed Pilot* to emphasize the importance of preserving one's vision in aviation.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.2 Explain the visual illusions that can occur during flight.

PERFORMANCE OBJECTIVE

P4.2 Given a simulation of an aircraft in flight, explain with 75% accuracy the visual illusions that can occur.

CRITERION-REFERENCED MEASURE

C4.2 Oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Read and discuss selected stories of pilots who have experienced illusions in flight, sometimes causing accidents or near-accidents.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.3 Explain aircraft position lights and how they are used to avoid collisions.

PERFORMANCE OBJECTIVE

P4.3 Given a model aircraft or a photograph or diagram of an aircraft, explain with 80% accuracy the aircraft's position lighting and how it is used to avoid collisions.

CRITERION-REFERENCED MEASURE

C4.3 Demonstration, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use the static aircraft to discuss the position lights and how they are used in flight.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.4 Explain how visual sense, vestibular sense, and kinesthetic sense differ.

PERFORMANCE OBJECTIVE

P4.4 Given a simulation of an aircraft in flight, explain with 75% accuracy how visual sense, vestibular sense, and kinesthetic sense differ.

CRITERION-REFERENCED MEASURE

C4.4 Oral or written test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Place a blindfolded student on a rotating stool and spin it around. Have the class notice that when the student is abruptly stopped, he may feel that he is still rotating. If the student attempts to stand, disorientation may result until the blindfold is removed.

2. Have the class study a diagram of the middle ear and determine the cause of the phenomenon.

3. Use the FAA film *Disorientation* to help explain the role of the middle ear in disorientation.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.5 Explain the various spatial illusions that may result from spatial disorientation.

PERFORMANCE OBJECTIVE

P4.5 Given a simulation where the pilot has restricted visibility, explain with 75% accuracy what spatial illusions may result when the pilot becomes spatially disoriented.

CRITERION-REFERENCED MEASURE

C4.5 Demonstration, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Discuss aircraft accidents resulting from spatial disorientation.

CONCEPT/DUTY AREA

4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

4.6 Explain flicker vertigo and its prevention.

PERFORMANCE OBJECTIVE

P4.6 Given a flight simulation with a pilot observing the horizon through a slowly rotating propeller, explain with 75% accuracy the physiological effect that the combination of sun, propeller, and fixed staring may have on the pilot's consciousness and ways to prevent the effect.

CRITERION-REFERENCED MEASURE

C4.6 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Define flicker vertigo.
2. Have students observe light through a fan and note the hypnotizing effect it may have after a period of time.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.7 Explain the cause, prevention, and alleviation of motion sickness.

PERFORMANCE OBJECTIVE

P4.7 Given a simulation of an aircraft in flight, explain with 75% accuracy the cause, prevention, and alleviation of motion sickness among aircraft passengers.

CRITERION-REFERENCED MEASURE

C4.7 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Read and discuss cases of how pilots prevented or reduced motion sickness among passengers.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.8 Explain the symptons and treatment of hypoxia.

PERFORMANCE OBJECTIVE

P4.8 Given a simulation of an aircraft flying above 10,000 feet altitude, explain with 75% accuracy the symptoms and treatment of hypoxia.

CRITERION-REFERENCED MEASURE

C4.8 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Define hypoxia.
2. Use FAA film *Hypoxia* to explain the phenomenon.
3. Take a field trip to the Air National Guard operations section to obtain training on the oxygen mask and regulator.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.9 Explain the effects of altitude changes on the sinuses, ears, teeth, and gastrointestinal tract.

PERFORMANCE OBJECTIVE

P4.9 Given diagrams of the human ear, sinuses, teeth, and gastrointestinal tract, explain with 75% accuracy how altitude changes cause physiological changes in these parts of the body.

CRITERION-REFERENCED MEASURE

C4.9 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use JS video *Aviation Physiology* to explain how altitude changes affect the human body.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.10 Explain why scuba diving is dangerous for aviators.

PERFORMANCE OBJECTIVE

P4.10 Given a situation in which a pilot departs on a flight only three hours after scuba diving, explain with 75% accuracy the dangers involved.

CRITERION-REFERENCED MEASURE

C4.10 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Read about and discuss aircraft accident reports where the pilot's scuba diving was a factor.

CONCEPT/DUTY AREA	COURSE
4. UNDERSTANDING HOW ALTITUDE AND MOVEMENT IN FLIGHT AFFECT THE HUMAN BODY	Aviation Pilot Training II

TASK/COMPETENCY

4.11 Explain why alcohol, drugs, and smoking are all dangerous for aviators.

PERFORMANCE OBJECTIVE

P4.11 Given information on the effects of alcohol, drugs, and smoking, identify with 75% accuracy three ways in which each is dangerous to aviators.

CRITERION-REFERENCED MEASURE

C4.11 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use FAA video *A Pilot's Prescription for Flight* to describe the effects of drugs and alcohol on a pilot.
2. Visit the Air National Guard flight surgeon or an FAA medical examiner to discuss various physiological aspects of flying.
3. Read about and discuss aircraft accident reports showing how alcohol, drugs, or smoking was a factor in the accident.

RESOURCES

TASK 4.1

Equipment and Material: Diagrams of human eye

Audiovisuals: *Dusk to Dawn* (film). FAA.
The Eagle-Eyed Pilot (videotape). FAA.

TASK 4.2

References: Stories of pilots experiencing visual illusions in flight

TASK 4.3

Equipment and Material: Model aircraft or photograph or diagram of aircraft

TASK 4.4

Equipment and Material: Blindfold
Rotating stool
Diagram of middle ear

Audiovisuals: *Disorientation* (film). FAA.

TASK 4.5

Equipment and Material: Fan

TASK 4.6

Equipment and Material: Case studies of pilots treating motion sickness

TASK 4.7

Audiovisuals: *Hypoxia* (film). FAA.

TASK 4.8

Audiovisuals: *Aviation Physiology* (videotape). Jeppesen Sanderson.

RESOURCES (continued)

TASK 4.9

References: Aircraft accident reports involving pilot scuba diving

TASK 4.10

Audiovisuals: *A Pilot's Prescription for Flight* (vidotape). FAA.

References: Aircraft accident reports that involve pilot's use of alcohol, drugs, or tobacco

CONCEPT/DUTY AREA

5. UNDERSTANDING SHORT AND SOFT FIELD OPERATIONS

TASKS/COMPETENCIES

5.1 Explain the procedure for a short field takeoff.

5.2 Explain the procedure for a normal short field landing and a short field landing over a 50-foot obstacle.

5.3 Explain the procedure for a soft field takeoff.

5.4 Explain the procedure for a soft field landing.

CONCEPT/DUTY AREA

5. UNDERSTANDING SHORT AND SOFT FIELD OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

5.1 Explain the procedure for a short field takeoff.

PERFORMANCE OBJECTIVE

P5.1 Given a diagram of a minimum length runway for the aircraft assigned, explain with 80% accuracy the procedure for planning and executing a takeoff.

CRITERION-REFERENCED MEASURE

C5.1 Written or oral test, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use FAA Safety VII video *Takeoffs and Landings* to demonstrate techniques in soft and short field operations.

CONCEPT/DUTY AREA

5. UNDERSTANDING SHORT AND SOFT FIELD OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

5.2 Explain the procedure for a normal short field landing and a short field landing over a 50-foot obstacle.

PERFORMANCE OBJECTIVE

P5.2 Given a diagram of a minimum length runway for the aircraft assigned, explain with 80% accuracy the procedure for planning and executing a short field landing with and without a 50-foot obstacle on approach.

CRITERION-REFERENCED MEASURE

C5.2 Written or oral test, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use a model aircraft to demonstrate technique in short field operations.
2. Review short field portion of FAA video *Takeoffs and Landings*.

CONCEPT/DUTY AREA

5. UNDERSTANDING SHORT AND SOFT FIELD OPERATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

5.3 Explain the procedure for a soft field takeoff.

PERFORMANCE OBJECTIVE

P5.3 Given a model aircraft and a simulated grass (soft) field, explain with 80% accuracy the procedure for takeoff.

CRITERION-REFERENCED MEASURE

C5.3 Demonstration, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use a model aircraft to demonstrate technique in soft field operations.
2. Review soft field portion of FAA video *Takeoffs and Landings*.

CONCEPT/DUTY AREA	COURSE
5. UNDERSTANDING SHORT AND SOFT FIELD OPERATIONS	Aviation Pilot Training II

TASK/COMPETENCY

5.4 Explain the procedure for a soft field landing.

PERFORMANCE OBJECTIVE

P5.4 Given a model aircraft and a simulated grass (soft) field, explain with 80% accuracy the procedure for landing.

CRITERION-REFERENCED MEASURE

C5.4 Demonstration, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review and discuss aircraft accident reports where the accident occurred on a grass strip.

RESOURCES

TASK 5.1

Equipment and Material:	Runway diagram
Audiovisuals:	*Takeoffs and Landings* (videotape). FAA.

TASK 5.2

Equipment and Material:	Model aircraft Runway diagram
Audiovisuals:	*Takeoffs and Landings* (videotape). FAA.

TASK 5.3

Equipment and Material:	Model aircraft Simulated soft field
Audiovisuals:	*Takeoffs and Landings* (videotape). FAA.

TASK 5.4

Equipment and Material:	Model aircraft Simulated soft field
References:	Aircraft accident reports

CONCEPT/DUTY AREA

6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT

TASKS/COMPETENCIES

6.1 Explain four steps in cross-country planning before beginning the navigational log.

6.2 Complete each leg in a navigational log.

6.3 Identify five items the pilot gives to the weather briefer before obtaining the final weather information for the cross-country route.

6.4 Complete a VFR flight plan and explain procedures for filing it with Flight Service.

6.5 List five items a pilot would take on a cross-country flight that are not normally taken on a local flight.

6.6 Explain how a pilot arranges and manages the cockpit in cross-country flying.

CONCEPT/DUTY AREA	COURSE
6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT	Aviation Pilot Training II

TASK/COMPETENCY

6.1 Explain four steps in cross-country planning before beginning the navigational log.

PERFORMANCE OBJECTIVE

P6.1 Given a sectional chart and a route for a cross-country flight, explain with 80% accuracy the four planning steps before beginning the navigational log.

CRITERION-REFERENCED MEASURE

C6.1 Written or oral test, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use the overhead projector and sectional chart transparencies to illustrate beginning stages of flight planning.

CONCEPT/DUTY AREA

6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

6.2 Complete each leg in a navigational log.

PERFORMANCE OBJECTIVE

P6.2 Given a navigational log and route of a proposed flight, complete each leg of the log. Completed log must be 80% accurate.

CRITERION-REFERENCED MEASURE

C6.2 Completed log, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use the overhead projector and navigational log transparencies to illustrate leg entries.

CONCEPT/DUTY AREA

6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

6.3 Identify five items the pilot gives to the weather briefer before obtaining the final weather information for the cross-country route.

PERFORMANCE OBJECTIVE

P6.3 Given the route of flight, navigational log, and weather log, identify the five items a pilot gives to the weather briefer before receiving any weather information. Answer must be 80% accurate.

CRITERION-REFERENCED MEASURE

C6.3 Written or oral test, 80% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review Chapter 9 of *Aviation Fundamentals* regarding how to acquire weather information.

CONCEPT/DUTY AREA

6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

6.4 Complete a VFR flight plan and explain procedures for filing it with Flight Service.

PERFORMANCE OBJECTIVE

P6.4 Given a blank VFR flight plan, route of flight, navigational log, and weather log, complete the VFR flight plan and explain how it is filed with Flight Service. Answer must be 75% accurate.

CRITERION-REFERENCED MEASURE

C6.4 Completion of flight plan, explanation of filing procedure, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use the overhead projector and VFR flight plan transparencies to illustrate the procedure for completing and filing the plan.

CONCEPT/DUTY AREA	COURSE
6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT	Aviation Pilot Training II

TASK/COMPETENCY

6.5 List five items a pilot takes on a cross-country flight that are not normally taken on a local flight.

PERFORMANCE OBJECTIVE

P6.5 Given a route of flight and a sectional chart, list with 75% accuracy five items a pilot takes on a cross-country flight that are not normally taken on a local flight.

CRITERION-REFERENCED MEASURE

C6.5 Written test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Distribute sectional charts and go over them, noting the terrain and items that should be taken on a cross-country flight according to forecast weather and route of flight.

CONCEPT/DUTY AREA

6. UNDERSTANDING PROCEDURES FOR PLANNING A LOW-ALTITUDE CROSS-COUNTRY FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

6.6 Explain how a pilot arranges and manages the cockpit in cross-country flying.

PERFORMANCE OBJECTIVE

P6.6 Given a simulation of a typical cross-country flight, explain with 75% accuracy how a pilot arranges and manages the cockpit before and during the flight.

CRITERION-REFERENCED MEASURE

C6.6 Demonstration, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use FAA video *Basic Fuel Management* to demonstrate how the pilot manages his fuel on a cross-country flight.
2. Use FAA video *VFR Tips for All Pilots by Duane Cole* to illustrate typical cross-country flight over all types of terrain.

RESOURCES

TASK 6.1

Equipment and Material: Sectional charts
Overhead projector

Audiovisuals: Sectional chart transparencies

TASK 6.2

Equipment and Material: Navigational log
Overhead projector

Audiovisuals: Navigational log transparencies

TASK 6.3

Equipment and Material: Navigational log
Weather log

References: *Aviation Fundamentals.* Jeppesen Sanderson.

TASK 6.4

Equipment and Material: Blank VFR flight plans
Navigational log
Weather log
Overhead projector

Audiovisuals: VFR flight plan transparencies

TASK 6.5

Equipment and Material: Sectional charts

TASK 6.6

Audiovisuals: *Basic Fuel Management* (videotape). FAA.
VFR Tips for All Pilots by Duane Cole (videotape). FAA.

CONCEPT/DUTY AREA

7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION

TASKS/COMPETENCIES

7.1 Explain how sound decision making in aviation must take into account the pilot, aircraft, environment, operation, and situation.

7.2 Explain the meaning and function of the acronym DECIDE.

7.3 Explain the attitudes that are hazardous to decision making.

7.4 Explain the three types of stress and how they can affect pilot decision making.

7.5 Explain the items on the "I'm Safe" checklist and why each should be evaluated before a flight.

CONCEPT/DUTY AREA

7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

7.1 Explain how sound decision making in aviation must take into account the pilot, aircraft, environment, operation, and situation.

PERFORMANCE OBJECTIVE

P7.1 Given a specific in-flight situation that requires a pilot decision, explain how sound decision making must take into account the pilot, aircraft, environment, and operation. Answer must be 75% accurate.

CRITERION-REFERENCED MEASURE

C7.1 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use JS video *Aeronautical Decision Making* to explain the factors involved in the constant string of decisions a pilot must make in flight.

CONCEPT/DUTY AREA

7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

7.2 Explain the meaning and function of the acronym DECIDE.

PERFORMANCE OBJECTIVE

P7.2 Given the acronym DECIDE, explain its meaning and how it can help a pilot remember the factors in the decision process. Answer must be 85% accurate.

CRITERION-REFERENCED MEASURE

C7.2 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Explain the meaning of DECIDE.
2. Give students three problems that can develop in flight. Have them use the acronym DECIDE to determine the action to take in each case.

CONCEPT/DUTY AREA

7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

7.3 Explain the attitudes that are hazardous to decision making.

PERFORMANCE OBJECTIVE

P7.3 Given the five attitudes that are hazardous to decision making, explain and give an example of how each can prevent the pilot from making a sound decision. Answer must be 75% accurate.

CRITERION-REFERENCED MEASURE

C7.3 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review aircraft accident reports where the attitude of the pilot was a factor.
2. Use the FAA film *The Flight Decision* to demonstrate how attitudes can affect sound decision making.

CONCEPT/DUTY AREA

7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

7.4 Explain the three types of stress and how they can affect pilot decision making.

PERFORMANCE OBJECTIVE

P7.4 Given information on the three types of stress, explain each and give an example showing how it can affect pilot decision making. Answer must be 75% accurate.

CRITERION-REFERENCED MEASURE

C7.4 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Define the three types of stress.
2. Review aircraft accident reports where stress was a factor.

CONCEPT/DUTY AREA

7. UNDERSTANDING THE FACTORS THAT AFFECT DECISION MAKING IN AVIATION

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

7.5 Explain the items on the "I'm Safe" checklist and why each should be evaluated before a flight.

PERFORMANCE OBJECTIVE

P7.5 Given a copy of the "I'm Safe" checklist, explain each of the six items and why the items should be carefully evaluated before a flight. Answer must be 75% accurate.

CRITERION-REFERENCED MEASURE

C7.5 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review JS video *Aeronautical Decision Making* to summarize the duty area on decisions in flight.

RESOURCES

TASK 7.1

Audiovisuals: *Aeronautical Decision Making* (videotape). Jeppesen Sanderson.

TASK 7.2

Equipment and Material: Flight problems

TASK 7.3

Audiovisuals: *The Flight Decision* (film). FAA.

TASK 7.4

Equipment and Material: Aircraft accident reports involving stress.

TASK 7.5

Equipment and Material: "I'm Safe" checklist

Audiovisuals: *Aeronautical Decision Making* (videotape). Jeppesen Sanderson.

CONCEPT/DUTY AREA

8. UNDERSTANDING ACCIDENT REPORTING, PRIVATE PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS

TASKS/COMPETENCIES

8.1 Explain the accident report requirements of the National Transportation Safety Board (NTSB).

8.2 Explain the Federal Aviation Regulations (FARs) regarding private pilot privileges and limitations.

8.3 Explain the Federal Aviation Regulations (FARs) regarding flight operations for private pilots.

8.4 Explain the general contents and purpose of the *Airman's Information Manual* (AIM).

8.5 Explain the function of FAA advisory circulars.

CONCEPT/DUTY AREA

8. UNDERSTANDING ACCIDENT REPORTING, PRIVATE PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

8.1 Explain the accident reporting requirements of the National Transportation Safety Board (NTSB).

PERFORMANCE OBJECTIVE

P8.1 Given a simulated aircraft accident, explain with 85% accuracy the pilot's reporting procedures according to the requirements of the NTSB.

CRITERION-REFERENCED MEASURE

C8.1 Written or oral test, 85% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use overhead projector and transparencies to explain accident reporting procedures in *NSTB, Part 830.*

CONCEPT/DUTY AREA

8. UNDERSTANDING ACCIDENT REPORTING, PRIVATE PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

8.2 Explain the Federal Aviation Regulations (FARs) regarding private pilot privileges and limitations.

PERFORMANCE OBJECTIVE

P8.2 Given a copy of *FAR, Part 61.118* regarding private pilot privileges and limitations, explain with 90% accuracy the meaning of each paragraph.

CRITERION-REFERENCED MEASURE

C8.2 Written or oral test, 90% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review *Federal Aviation Regulations, Part 61.118* and discuss in detail.

CONCEPT/DUTY AREA

8. UNDERSTANDING ACCIDENT *REPORTING, PRIVATE PILOT* PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

8.3 Explain the Federal Aviation Regulations (FARs) regarding flight operations for private pilots.

PERFORMANCE OBJECTIVE

P8.3 Given a copy of *FAR, Part 91* regarding general operating and flight rules, explain with 70% accuracy each paragraph pertaining to private pilots.

CRITERION-REFERENCED MEASURE

C8.3 Written or oral test, 70% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review *FAR, Part 91*. Read and discuss all paragraphs that pertain to flight operations for private pilots.

CONCEPT/DUTY AREA

8. UNDERSTANDING ACCIDENT REPORTING, PRIVATE PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

8.4 Explain the general contents and purpose of the *Airman's Information Manual* (AIM).

PERFORMANCE OBJECTIVE

P8.4 Given the *Airman's Information Manual* (AIM), explain with 70% accuracy the contents and function of each of the four sections.

CRITERION-REFERENCED MEASURE

C8.4 Written or oral test, 70% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review the *Airman's Information Manual* (AIM). Discuss each section, and assign students items to look up for reference.

2. Provide students with copies of the AIM, FARs, and sectional charts. Distribute problems and have students use these three references to find the answers.

CONCEPT/DUTY AREA

8. UNDERSTANDING ACCIDENT REPORTING, PRIVATE PILOT PRIVILEGES AND LIMITATIONS, FLIGHT OPERATIONS, AND USE OF TECHNICAL PUBLICATIONS

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

8.5 Explain the function of the FAA advisory circulars.

PERFORMANCE OBJECTIVE

P8.5 Given a copy of an FAA advisory circular, explain the function of the circular with 75% accuracy.

CRITERION-REFERENCED MEASURE

C8.5 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Distribute copies of FAA advisory circulars. Discuss the circulars and how they are used by pilots.

RESOURCES

TASK 8.1

Equipment and Material:	Overhead projector
Audiovisuals:	Transparencies from NSTB, Part 830.
Reference:	NSTB, Part 830.

TASK 8.2

Reference:	*Federal Aviation Regulations, Part 61.118.* FAA.

TASK 8.3

Reference:	*Federal Aviation Regulations, Part 91.* FAA.

TASK 8.4

Equipment and Material:	Sectional charts
Reference:	*Airman's Information Manual* (AIM). *Federal Aviation Regulations.* FAA.

TASK 8.5

Equipment and Material:	FAA advisory circulars

CONCEPT/DUTY AREA

9. UNDERSTANDING PLANNING AND PROCEDURES FOR NIGHT FLIGHT

TASKS/COMPETENCIES

9.1 Explain the internal and external lighting in a typical light aircraft.

9.2 Explain the runway, taxiway beacon, and ramp lighting at a typical municipal airport.

9.3 Explain special cross-country flight planning required for night flights.

9.4 Explain the physiological effects of night flying and how the pilot can compensate for the effects.

CONCEPT/DUTY AREA

9. UNDERSTANDING PLANNING AND PROCEDURES FOR NIGHT FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

9.1 Explain the internal and external lighting in a typical light aircraft.

PERFORMANCE OBJECTIVE

P9.1 Given a model or diagram of an aircraft, explain with 75% accuracy the internal and external lighting systems.

CRITERION-REFERENCED MEASURE

C9.1 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use the static aircraft to explain the location and function of the lighting systems.

CONCEPT/DUTY AREA

9. UNDERSTANDING PLANNING AND PROCEDURES FOR NIGHT FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

9.2 Explain the runway, taxiway, beacon, and ramp lighting at a typical municipal airport.

PERFORMANCE OBJECTIVE

P9.2 Given a diagram of a typical municipal airport, explain with 75% accuracy the runway, taxiway, beacon, and ramp lighting normally installed.

CRITERION-REFERENCED MEASURE

C9.2 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Use slides and transparencies to describe and explain the lighting systems that are normally installed at airports.

CONCEPT/DUTY AREA

9. UNDERSTANDING PLANNING AND PROCEDURES FOR NIGHT FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

9.3 Explain special cross-country flight planning required for night flights.

PERFORMANCE OBJECTIVE

P9.3 Given a sectional chart, route, and time of takeoff, explain with 75% accuracy the special considerations in flight planning for the portions of the flight to be flown at night.

CRITERION-REFERENCED MEASURE

C9.3 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review FAA film *Dusk to Dawn* to emphasize special planning required for cross-country night flights.

CONCEPT/DUTY AREA

9. UNDERSTANDING PLANNING AND PROCEDURES FOR NIGHT FLIGHT

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

9.4 Explain the physiological effects of night flying and how the pilot can compensate for the effects.

PERFORMANCE OBJECTIVE

P9.4 Given a simulated night flight, explain with 75% accuracy how the eye functions at night and techniques the pilot can use to increase night vision acuity.

CRITERION-REFERENCED MEASURE

C9.4 Written or oral test, 75% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review the night scanning technique and specific types of disorientation associated with night flying.

RESOURCES

TASK 9.1

Equipment and Material:
- Static aircraft
- Model aircraft
- Diagrams of aircraft

TASK 9.2

Audiovisuals:
- Slides/transparencies of municipal airport lighting system

TASK 9.3

Equipment and Material:
- Sectional charts

Audiovisuals:
- *Dusk to Dawn* (film). FAA.

CONCEPT/DUTY AREA

10. UNDERSTANDING PROCEDURES FOR THE FAA PRIVATE PILOT'S FLIGHT CHECK

TASKS/COMPETENCIES

10.1 Explain the general instructions from the FAA flight examiner that a private pilot should expect before the flight check.

10.2 Explain the items included on the FAA flight check for private pilot.

10.3 Explain the student-pilot's best preparation 24 hours before the flight check.

10.4 Explain the reponsibilities of the private pilot after successful completion of the flight check.

CONCEPT/DUTY AREA

10. UNDERSTANDING PROCEDURES FOR THE FAA PRIVATE PILOT'S FLIGHT CHECK

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

10.1 Explain the general instructions from the FAA flight examiner that a private pilot should expect before the flight check.

PERFORMANCE OBJECTIVE

P10.1 Given a scheduled flight check, explain with 100% accuracy what general instructions a private pilot should expect from the FAA flight examiner.

CRITERION-REFERENCED MEASURE

C10.1 Written or oral test, 100% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Review the briefings on past flight checks by FAA examiners, and discuss them with students.

CONCEPT/DUTY AREA

10. UNDERSTANDING PROCEDURES FOR THE FAA PRIVATE PILOT'S FLIGHT CHECK

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

10.2 Explain the items included on the FAA flight check for private pilot.

PERFORMANCE OBJECTIVE

P10.2 Given a typical FAA private pilot flight check, explain with 100% accuracy each item included.

CRITERION-REFERENCED MEASURE

C10.2 Written or oral test, 100% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. List and discuss all items a pilot can expect to be included on the FAA flight check.

2. Have students conduct self-evaluations on each item of the flight check and award themselves an expected overall percentage grade.

CONCEPT/DUTY AREA

10. UNDERSTANDING PROCEDURES FOR THE FAA PRIVATE PILOT'S FLIGHT CHECK

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

10.3 Explain the student-pilot's best preparation 24 hours before the flight check.

PERFORMANCE OBJECTIVE

P10.3 Given a scheduled flight check within the next 24 hours, explain with 100% accuracy the best preparation for a student-pilot.

CRITERION-REFERENCED MEASURE

C10.3 Written or oral test, 100% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Discuss the best means of being prepared mentally and physically for a scheduled flight check.
2. Ask an FAA flight examiner to discuss with the class what to expect on a flight check and how to be prepared both mentally and physically.

CONCEPT/DUTY AREA

10. UNDERSTANDING PROCEDURES FOR THE FAA PRIVATE PILOT'S FLIGHT CHECK

COURSE

Aviation Pilot Training II

TASK/COMPETENCY

10.4 Explain the responsibilities of the private pilot after successful completion of the flight check.

PERFORMANCE OBJECTIVE

P10.4 Given a successful flight check, explain with 100% accuracy the new responsibilities of a person with a private pilot's license.

CRITERION-REFERENCED MEASURE

C10.4 Written or oral test, 100% accuracy

ENABLING OBJECTIVES/LEARNING ACTIVITIES

1. Discuss the responsibilities of the new private pilot.
2. Use FAA video *Path to Safety--Dramatic Incidents That Can Occur as a Result of Misjudgment* to emphasize the dangers in being overconfident.

RESOURCES

TASK 10.1

Equipment and Material: FAA briefings on past flight checks

TASK 10.2

Equipment and Material: Private pilot flight check

TASK 10.4

Audiovisuals: *Path to Safety--Dramatic Incidents That Can Occur as a Result of Misjudgment* (videotape).
FAA.